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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,604	02/15/2001	Atsushi Shimoda	501.39619X00	9403

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EXAMINER	
KIBLER, VIRGINIA M	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/783,604	SHIMODA ET AL.	
	Examiner	Art Unit	
	Virginia M Kibler	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,7,8,12,13,16,19,23,24 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,7,8,12,13,16,19,23,24 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment received on 4/2/04 has been entered. Claims 1, 5, 7, 8, 12, 13, 16, 19, 23, 24, and 29-32 remain pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5, 7, 8, 12, 13, 16, 19, 23, 24, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (5,801,965) in view of Matsuo (JP 11-176899).

Regarding claims 1, 5, and 13, Takagi et al. ("Takagi") discloses a step for inspecting a first object to detect defects during a production process and obtaining position information of the defects (Col. 10, lines 59-67; Col. 11, lines 41-45); a step for detecting images of the defects using the position information of the defects obtained (Col. 11, lines 41-45); a step for performing an electronic test on the first object after the production process is complete to detect faults in the first object and obtain position information of the faults (Col. 17, lines 57-67, Col. 18, lines 1-22); a step for classifying images of extracted defects into critical defect images and non-critical defect images based on a classification rule (Col. 18, lines 8-65); a step for displaying images of classified defects on a screen by discriminating between the critical defect images and

the non-critical defect images (Col. 18, lines 40-65; Col. 14, lines 47-65); a step for modifying the classification rule by correcting classification of the classified defect images displayed on the screen (Col. 18, lines 55-65; Col. 9, lines 28-42); a step for inspecting a second object during the production process to detect defects and obtain information of the defect including position information and image of the defects (Col. 7, lines 20-23; Col. 10, lines 59-67; Col. 11, lines 41-45); a step for classifying images of the defects detected on the second object into critical defects and non-critical defects by using a modified classification rule (Col. 7, lines 20-23; Col. 18, lines 23-65); and a step for outputting information on the classified defect images of the second object (Col. 18, lines 55-65). Takagi discloses detecting a position of a fault using an electronic test and then extracting defects from the obtained position (Col. 17, lines 57-67, Col. 18, lines 1-22). Takagi does not appear to recognize comparing the position information of the defects with position information of the faults and extracting defects having common position information between the defects and the faults. However, Matsuo discloses comparing position information of defects with position information of faults and determining those with having common position information between the defects and the faults (Para. 0012-0019). Takagi and Matsuo are combinable because they are from the same field of endeavor of defect detection. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the defect and fault detection disclosed by Takagi to include comparing the positions to determine those with having common position information between the defects and the faults. The motivation for doing so would have been because it provides independent inspections and thereby

increases the reliability of the inspection. Therefore, it would have been obvious to combine Takagi with Matsuo to obtain the invention as specified in claims 1, 5, and 13.

Regarding claims 16 and 23, the arguments analogous to those presented above for claim 1 are applicable to claims 16 and 23. Takagi discloses a classifying means for classifying the position information of the defects as either critical defects of non-critical defects using a first classification rule (Col. 18, lines 40-54) and a second classifying means for classifying the detailed information, or image information, of the defects as either critical or non-critical referring to the classified position information of defects using a second classification rule (Col. 18, lines 8-65). While Takagi discloses storing the position information and detailed information of the defects and faults, Takagi does not appear to recognize specifying separate memories. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the storage disclosed by Takagi to include separate memories. The motivation for doing so would have been because it is well known in the art and reduces the data acquisition time. Therefore, it would have been obvious to have modified Takagi and Matsuo to obtain the invention as specified in claims 16 and 23.

Regarding claims 7, 19, and 31, Takagi discloses classifying the detailed information, or image information, of the defects of the second object including non-critical defects classified into at least two categories (Figure 5).

Regarding claims 8 and 32, Takagi does not appear to recognize providing a defect generation rate for each defect class. However, Matsuo discloses outputting information relating to a defect generation rate for each classification of the classified defects (Para. 0020). At the time of the invention, it would have been obvious to one of

ordinary skill in the art to have modified the defect classification disclosed by Takagi to include a defect generation rate. The motivation for doing so would have been because it provides a distribution of defect frequency thereby increasing the defect analysis. Therefore, it would have been obvious to combine Takagi with Matsuo to obtain the invention as specified in claims 8 and 32.

Regarding claims 12 and 24, Takagi discloses the detailed information as a defect image (Col. 11, lines 41-45).

Regarding claim 29, the arguments analogous to those presented above for claims 1 and 12 are applicable to claim 29.

Regarding claim 30, Takagi discloses a step for counting the number of defects (Col. 10, lines 61-67) and classifying defects as critical defects and displaying information of the critical defects (Col. 18, lines 40-65). Takagi does not appear to recognize counting the number of critical defects. However, in light of his disclosure it would have been an obvious matter of design choice.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 5, 7, 8, 12, 13, 16, 19, 23, 24, and 29-32 have been considered but are moot in view of the new ground of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Virginia Kibler
07/11/04

MEHRDAD DASTOURI
PRIMARY EXAMINER